

Findings of Fact and Director's Decision

Bio Energy LLC – July 22, 2003

The Clean Air Act Amendments of 1990 (CAAA) created a new federal permit program for the nation's largest emission sources (called "major sources"). The CAAA required states to develop and implement this program consistent with federal regulations. This operating permit program, commonly called "Title V", became effective in New Hampshire on June 30, 1995. Bio Energy LLC of Hopkinton, NH (Bio Energy) filed a Title V Operating Permit application on September 12, 1995 indicating that the facility is a major source of particulate matter and carbon monoxide emissions (i.e., has the potential to emit more than 100 tons per year) and is also a major source of nitrogen oxide emissions (i.e., has the potential to emit more than 50 tons per year). The New Hampshire Department of Environmental Services, Air Resources Division (DES) issued a Title V Operating Permit for the facility on July 23, 1998.

On June 21, 2002, Bio Energy submitted a permit application for a proposed project to allow the burning of wood chips derived from construction and demolition debris (C/D chips) in the Boiler. Currently the facility is allowed to burn whole tree wood chips, clean processed wood fuel, No. 2 fuel oil, or combinations of these three fuels in the Boiler. In its application, Bio Energy requested to burn up to 100% of C/D chips or a blend of C/D chips with currently permitted fuels. In order to process the C/D material, Bio Energy is adding a conveyor line to take the chips from the chip pile into the building and through an air separator to remove light materials such as plastics. The chips will then be conveyed through a wash tank to remove fines, sand, grit, and tramp metals such as nails. The wash tank also adds moisture to the chips and makes for a more homogenous moisture content of the fuel being fired in the Boiler, which allows for better combustion. In its review of the application, DES determined that this change in fuel required a "significant modification" (as defined in the New Hampshire Code of Administrative Rules, Env-A 101.247 – "Significant modification") to Bio Energy's Title V Operating Permit. On December 11, 2002, DES sent a letter to Bio Energy indicating the procedural requirements for a significant modification contained in Env-A 612.05 apply in this case and requested additional information. DES received the supplemental information on January 16, 2003 necessary for processing this operational change as a significant modification to the Title V Operating Permit.

Once an application for a significant modification is submitted, there are typically four phases in the Title V permitting process:

- First, the application undergoes an initial review process by DES to ensure that the information submitted is complete and includes all appropriate regulatory requirements. If so, a "completeness determination" is issued by DES.
- After the application has been deemed administratively complete, DES undertakes an extensive review, including but not limited to facility site visits and an analysis of historical information. Once DES has completed this review and is confident that the

application accurately reflects the facility's operations, a "draft Title V Operating Permit" is developed by DES. The draft Title V Operating Permit contains all applicable regulatory requirements (both state and federal) that pertain to the facility.

- Once prepared, the draft Title V Operating Permit is noticed to the public as outlined in the New Hampshire Code of Administrative Rules, Env-A 200, *Procedural Rules* (under Env-A 206.02 *Public Notice*). The public, the United States Environmental Protection Agency (EPA), affected states, and any other interested party are invited to submit comments on the draft Title V Operating Permit. An opportunity for a public hearing is also provided.
- After all comments have been received and evaluated by DES, a final determination regarding the permit is made by the Director of the Air Resources Division (Director). If not denied, the draft Title V Operating Permit is designated as "proposed" and sent to EPA for its review. The draft Title V Operating Permit may be modified as a result of comments received during the public comment period before it is sent to EPA as a proposed permit. If so, as in this case, a formal document is generated to address the changes made to the draft Title V Operating Permit. This document is called the "Findings of Fact and Director's Decision." The proposed permit is reviewed by EPA for forty-five days (or less). If EPA has no objections within this timeframe, the final permit is issued.

Parties dissatisfied with the Director's decision and proposed Title V Operating Permit can appeal to the Air Resources Council in accordance with the provisions of Env-A 206.09, *Permit Notice and Hearing Procedures: Title V Operating Permits – Appeals*, and Env-AC 206, *Appeals Procedures*.

Background

On April 18, 2003, DES published a public notice regarding the draft revised Title V Operating Permit for Bio Energy LLC (Bio Energy) in the *Manchester Union Leader* and the *Concord Monitor*. The notice invited public comment and indicated that any comments received during the public comment period would be evaluated prior to a final decision on this permit. The public notice also specified that a combined public hearing was scheduled for May 22, 2003 at 7 p.m. in the Hopkinton Town Hall, 330 Main St., Hopkinton, NH.

On May 22, 2003, DES conducted a combined public hearing regarding the draft revised Title V Operating Permit for Bio Energy and a review of the solid waste operating permit application at the address mentioned above. The purpose of the hearing was to receive public comment on the draft revised Title V Operating Permit and to answer any questions pertaining to the draft permit. During the public hearing, several citizens provided oral testimony regarding noise and asked questions about the boiler, pollution control equipment, and support facilities. Written testimony was also received from Ms. Susan B. Covert prior to the close of the comment period on May 29, 2003. All of the written and oral public comments, and written comments received from EPA were reviewed and considered by DES.

Discussion

At the public hearing, several citizens expressed concern about noise from the facility. DES has no statutory authority to regulate noise and urges the concerned citizens to address this issue with the local planning board and Bio Energy.

Mr. Byron Carr asked if the chip conveyor would be covered to prevent fugitive emissions and Mr. Harry Smith, V.P. Operations for Bio Energy, indicated that the conveyor would be covered throughout its length in the outdoors prior to entrance in the boiler building. In addition, Mr. Carr asked general questions about operation of the pollution control equipment on the boiler (multiclone, electrified fluidized bed, and baghouse), which Mr. Smith answered.

Mr. Carr also asked if DES looked at the deposition of pollutants on the ground from the boiler. DES explained that amounts of gaseous pollutants emitted (mass) and concentration of gaseous pollutants in the air are compared against the primary and secondary national ambient air quality standards specified in Env-A 300, Ambient Air Quality Standards and ambient air limits for regulated toxic air pollutants specified in Env-A 1400, Regulated Toxic Air Pollutants. DES sent a topography map to Mr. Carr which showed the location of maximum predicted annual average impacts from the Bio Energy facility, which is attached to this findings of fact. The maximum impacts are in compliance with all applicable standards.

Ms. Susan B. Covert submitted written comments received on May 29, 2003 indicating that she does not believe the proposed once a year air quality monitoring will be adequate to safeguard the quality of the community's environment or that of any towns downwind of the plant. On June 12, 2003, Bio Energy submitted written comments in response to Ms. Covert's written comment. In accordance with Env-A 1400, *Regulated Toxic Air Pollutants*, Bio Energy is required to demonstrate compliance with the Ambient Air Limits (AALs) for lead and all other regulated toxic air pollutants (RTAPs) that the facility emits. The purpose of Env-A 1400 is to prevent, control, abate, and limit the emissions of RTAPs into the ambient air in order to reduce human exposure and promote public health (Env-A 1401.01). AALs are health risk-based concentrations that DES has established with the guidance of the Department of Health and Human Services, Bureau of Health Risk Assessment, to protect the most sensitive populations of the public. In order to ensure that these health risk-based standards are met, the proposed Title V Operating Permit specifies operational limitations (less than 100 mg/kg lead content on a dry basis in the C/D chips fired in the boiler and less than 0.60 lb/hr lead emissions), monitoring of C/D chips (monthly composites from each chip supplier and Bio Energy's chips fed to the Boiler after the wash tank are to be tested at an independent laboratory with results sent to Bio Energy with quarterly and semi-annual reporting of chip testing analyses to DES and EPA), and testing requirements (two performance tests (stack testing) for metals and nitrogen oxides, particulate matter less than 10 microns, and carbon monoxide in the first year and annual lead and nitrogen oxides stack testing in the subsequent 4 years) that ensure compliance with the AALs. All stack testing will be conducted with the oversight of DES. DES believes that the above monitoring and testing is sufficient to demonstrate compliance.

Mr. Mike Close asked what types of materials would be contained in the C/D chips. Specifically, would painted wood be allowed to be burned in the Boiler. Mr. Close expressed concern about burning old wood containing lead paint. Allowable construction and demolition debris (C/D) chips is the wood materials from residential and commercial buildings that are demolished. This C/D material is typically floor boards, joices, interior wall studs, and trim strips from the structures and may contain painted wood. Painted wood from older buildings may contain lead paint. No pressure treated wood or creosote coated wood is allowed. Bio Energy can refuse delivery of shipments of C/D chips that visually appear to have a lot of painted wood. DES has included in the permit a limit on the lead content of the chips being fed to the Boiler of less than 100 milligrams lead per kilogram chip on a dry basis. In addition, DES has incorporated C/D chip testing requirements of the suppliers to Bio Energy and by Bio Energy, reporting of the chip test results, and stack testing of the Boiler, as described above.

EPA submitted comments on the draft Title V Operating Permit on June 4, 2003. In particular, EPA states that this permit is for Bio Energy and should not have requirements for a third party, i.e., fuel supplier, in relation to conducting testing of chips received at the Bio Energy facility. EPA suggested that either Bio Energy maintain records from the fuel supplier or perform the test themselves on incoming chips supplied to the facility. Bio Energy, in response to EPA's comments, indicates it shall maintain records of monthly analysis of C/D chips delivered to the facility from each supplier of C/D chips (monthly fuel certifications). DES has incorporated these comments in the Proposed Title V Operating Permit, with the following changes:

- Item 32, Table 6 – Bio Energy maintains records of monthly fuel certifications of C/D chips delivered to the facility from each fuel supplier or Bio Energy conducts testing of monthly composite C/D chip samples from each supplier.
- Item 5j), Table 7 – Bio Energy maintains copies of monthly fuel certifications from each supplier of C/D chips or maintains copies of testing results from monthly composite samples of incoming C/D chips sampled and collected by Bio Energy that are sent out for analysis.
- Item 1h), Table 8 – The semi-annual summary report is to contain a summary of monthly C/D chip fuel certifications or summary of monthly incoming C/D chip analyses conducted by Bio Energy.

Director's Decision

After consideration of Bio Energy's Title V Operating Permit Application, supplements thereto, and all public comments, the application is approved subject to the revisions noted above, and a proposed Title V Operating Permit reflecting these revisions will be forwarded to EPA for its review.

Pursuant to RSA 125-C:12, III and Env-A 206.09, *Permit Notice and Hearing Procedures: Title V Operating Permits - Appeals*, any person aggrieved by this action may file a

petition for appeal with the Air Resources Council within 10 days of the date below. Such appeal shall be filed in accordance with the provisions of Env-AC 206, *Appeals Procedures*, and forwarded to the Chair, Air Resources Council, 6 Hazen Drive, P.O. Box 95, Concord, NH 03302-0095. If no appeal is filed within the 10-day period, this decision shall become final.

Craig A. Wright
Administrator, Stationary Source
Management Bureau, Air Resources Division

Date

Enclosures: Correspondence to Mr. Byron Carr
Proposed Title V Operating Permit

cc: Town of Hopkinton
Public Hearing Attendees/Public Commenters
Harry Smith – Bio Energy LLC
William Dell’Orfano – Bio Development Corporation
Ida McDonnell – EPA Region 1
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